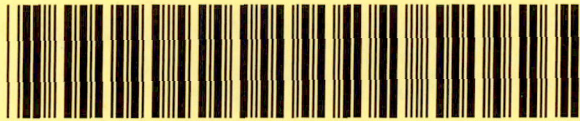


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DocumentID NONCD0002738

Site Name WILSON PEST CONTROL

DocumentType Progress/Monitoring Rpt (PRGMON)

RptSegment

DocDate 8/20/2009

DocRcvd 8/24/2009

Box SF3420

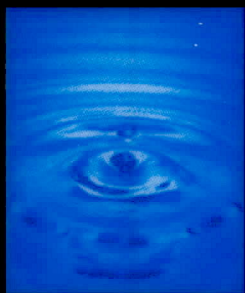
AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY



 Hart & Hickman

Via 2nd Day FedEx

August 20, 2009

NC DENR – DWM
Inactive Hazardous Sites Branch
585 Waughtown Street
Winston-Salem, NC 27017

Attention: Mr. Collin Day

Re: Ground Water Monitoring Report
401 West End Blvd. Property
Winston-Salem, North Carolina
H&H Job No. BDP-003

Dear Mr. Day:

Per your request, we are providing the attached Ground Water Monitoring Report for the above referenced site. Surface water and sediment sample results from Peters Creek are included. Should you have any questions or need additional information, please do not hesitate to contact me at (704) 586-0007.

Very truly yours,

Hart & Hickman, PC



Matt Bramblett, PE
Principal and Project Manager

Attachments

Cc: Mr. Don Nielsen, BDP (2 Copies via mail and PDF via email)

RECEIVED
N.C. Dept. of ENR

AUG 24 2009

Winston-Salem
Regional Office



Hart & Hickman
ENVIRONMENTAL CONSULTANTS

OUR CLIENTS DEMAND A SMARTER SOLUTION

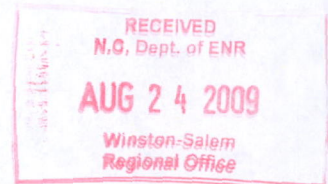
Hart & Hickman, PC
2923 South Tryon Street
Suite 100 Charlotte, NC
28203-5449

704-586-0007 phone
704-586-0373 fax
www.harthickman.com

Ground Water Monitoring Report
Former Wilson Pest Control
Winston-Salem, North Carolina

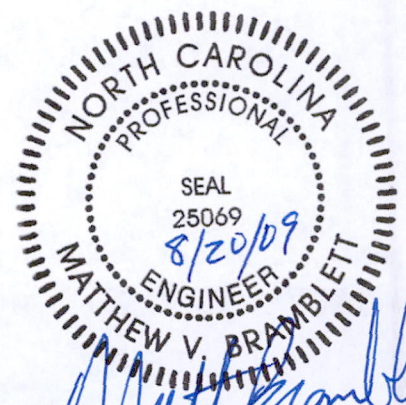
H&H Job No. BDP-003

August 20, 2009



2923 South Tryon Street
Suite 100
Charlotte, NC 28203
704-586-0007

3334 Hillsborough Street
Raleigh, NC 27607
919-847-4241



Matthew V. Bramblett

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**Ground Water Monitoring Report
Former Wilson Pest Control Property
Winston-Salem, North Carolina
H&H Job No. BDP-003**

1.0 Introduction

Hart & Hickman, PC (H&H) has completed ground water monitoring activities at the former Wilson Pest Control property located at 401 West End Boulevard in Winston-Salem, NC (Figure 1). A site map is provided as Figure 2. This report was prepared on behalf of Mr. Hugh Wilson III c/o Bell Davis and Pitt.

1.1 Site History

Soil and ground water impacts are present at the site from the operation of the former Wilson Pest Control business. The property was purchased for a pest control business in 1952. Wilson Pest Control operated until 1996. While Mr. Hugh Wilson, III currently owns the subject property, the property was previously leased to Wilson Pest Defense, a division of Centex Pest Management. Mr. Wilson did not work for or own Wilson Pest Defense. The site is currently vacant.

1.2 Initial Low Turbidity Sampling Events

H&H began monitoring the former Wilson Pest Control property in September 2006. H&H scheduled another monitoring event in February 2007 at the request of the North Carolina Department of Environment and Natural Resources (DENR) Aquifer Protection Section (APS) in a letter dated October 9, 2006. During the 2006 and 2007 sampling events, H&H obtained samples using low-flow purging with a peristaltic pump to minimize turbidity. Because pesticides adhere to sediment, dissolved-phase pesticide concentrations can be overstated if special attention is not given to obtaining low turbidity samples. The US EPA recommends turbidity readings to be 10 NTUs or less for this type of sampling.

Samples from each well were analyzed for non-filtered and filtered chlorinated pesticides in September 2006. However, in February 2007, all samples were analyzed for non-filtered chlorinated pesticides only, with the exception of MW-1 because the depth of water did not allow for low-flow purging techniques. MW-1 was sampled for filtered chlorinated pesticides in February 2007. Non-filtered samples from the subject site contained 1.36 to 12.06 NTUs, and the filtered samples contained 0.72 to 4.5 NTUs (Table 2). The water samples were visually clear, and the above numbers indicate that samples were low turbidity samples.

Chlorinated pesticides were detected above North Carolina ground water standards, as defined in 15A NCAC 2L regulations, in only two of the seven monitoring wells during the 2006 and 2007 monitoring events (Table 2). Chlordane was detected above its ground water standard of 0.1 µg/l in MW-3 at 1.6 µg/l (2006) and 1.16 µg/l (2007), and MW-7 at 5.25 µg/l (2006) and 5.02 µg/l (2007). Dieldrin was also detected above its standard of 0.0022 µg/l in MW-7 at 8.34 µg/l (2006) and 6.97 µg/l (2007). No other chlorinated pesticide detections exceeded ground water standards.

In DENR's October 2006 letter, they requested collection of three surface water samples and four sediment samples from Peters Creek which runs adjacent to the western portion of the Wilson Pest Control property. These samples were taken during the February 2007 monitoring event. No chlorinated pesticides were detected in the samples collected from Peters Creek. Based on a review of the receptor survey in the Comprehensive Site Assessment dated February 5, 2002 by the former consultant Engineering Tectonics, PA, Peters Creek is the only receptor of concern in the area.

1.3 Request for Additional Monitoring

In a letter dated June 23, 2009, DENR's Division of Waste Management (DWM) of the Winston-Salem Regional Office (WSRO) requested a groundwater, surface water and sediment sampling event for the subject site. H&H contacted Mr. Collin Day with the WSRO on July 20, 2009 to

inform him that sampling would be taking place on July 23, 2009. Mr. Collin Day indicated that he would not be able to meet H&H during field activities due to a schedule conflict; however, he stated that H&H should proceed with the sampling in his absence.

H&H proposed to sample the monitoring wells MW-1 through MW-7 using a HydraSleeve no purge sampler so as not to generate purge water drums. Because the HydraSleeve samples were placed in the well and allowed to sit for more than 24 hours, H&H anticipated that sample turbidity would be low. By doing so, the costs associated with activating the large quantity generator status and for drum disposal could be avoided. H&H confirmed with Mr. Collin Day of DENR that the HydraSleeve sampling technique was acceptable. An excerpt from a 2006 Interstate Technology Regulatory Council (ITRC) publication regarding HydraSleeve samplers is provided in Appendix B.

2.0 Ground Water/Surface Water Monitoring

This monitoring report summarizes the field activities performed and the data acquired from the monitoring event in July 2009. Monitoring included collection of water level data, ground water samples from seven on-site monitoring wells, and surface water and sediment samples from Peters Creek.

2.1 Ground Water Levels and Flow Direction

Water levels in site monitoring wells were gauged using an electronic water level meter on July 13, 2009 (Table 1). The depth to ground water ranged from approximately 26 ft below grade in the upgradient well to approximately 15 ft below grade in the source area and downgradient areas of the subject property. The estimated shallow potentiometric map constructed from July 2009 ground water elevation data is presented on Figure 3. Consistent with previous data, the ground water flow direction in the shallow aquifer is generally to the west toward Peters Creek.

2.2 Ground Water Sampling

After water levels were gauged, turbidity was measured in-situ with a Horiba U-22. Turbidity in the wells ranged from approximately 2 to 25 NTUs, with MW-1 reaching approximately 800 NTUs. H&H suspects the high turbidity measured in MW-1 was due to the oscillating motion used to obtain dissolved oxygen readings. Other than MW-1, no other dissolved oxygen readings were taken. Following turbidity measurements, HydraSleeve no-purge samplers were placed in each well on July 13, 2009 and allowed to stay approximately 10 days for potential turbidity to settle. On July 23, 2009, H&H returned to the site to retrieve the HydraSleeve samplers and obtain pH, conductivity, and temperature readings in-situ. Final turbidity readings were also taken from a small portion of sample water remaining in HydraSleeve sampler. The US EPA recommends turbidity readings to be 10 NTUs or less. Samples from MW-6, the deep well, read 3.78 NTUs while the others ranged from 33.5 to 1100 NTUs. H&H discussed the turbidity issue with EON products who is the vendor for HydraSleeve samplers. EON products determined that

site monitoring wells, with the exception of MW-6, did not have sufficient water column to allow the HydraSleeve to obtain a sample with low turbidity.

Ground water samples were collected from shallow monitoring wells MW-1 through MW-5 and MW-7. Deeper monitoring well MW-6 was also sampled. The ground water samples were analyzed for chlorinated pesticides by EPA Method 8081A.

Laboratory analyses were conducted by Prism Laboratories Inc., a North Carolina-certified laboratory. Dedicated laboratory-supplied sample bottles were used for sample collection. A chain-of-custody record was completed for samples collected and included sample description, date collected, time collected, matrix, sample container information, and analyses required. The chain-of-custody was signed by H&H and placed along with the samples in a chilled cooler for hand delivery to the laboratory by H&H. Copies of the laboratory analytical data sheets and chain-of-custody record are provided in Appendix B.

Chlorinated pesticides were detected above North Carolina ground water standards, as defined in 15A NCAC 2L regulations, in only three of the seven monitoring wells (Table 2). Chlordane was detected in MW-3 (1.6 µg/l) above its ground water standard of 0.1 µg/l. Dieldrin was detected in MW-3 (0.22 µg/l), MW-4 (0.27 µg/l), and MW-7 (6.7 µg/l) exceeding its standard of 0.0022 µg/l. Chlordane and dieldrin isoconcentration maps have been included as Figure 4 and Figure 5, respectively. No other chlorinated pesticide detections exceeded ground water standards. The ground water plume appears to be located within the boundaries of the subject property, considering that Peters Creek is not impacted.

As noted in Table 2, ground water concentrations detected in July 2009 are similar to those concentrations detected in February 2007. These data indicate that the plume is stable. In July 2009, Dieldrin concentrations in MW-7 were slightly lower while chlordane concentrations in MW-7 fell to below the laboratory method detection limits compared to 2007 data. However, dieldrin concentrations were observed in MW-3 and MW-4 for the first time during the July 2009 sampling event. While this compound was not previously detected in MW-3 and MW-4, it

has been previously detected in soil and ground water at this site. Chlordane concentrations were also slightly higher in MW-3 compared to 2007 data. H&H believes these slight increases in concentrations are due in part to the higher turbidity levels in samples taken in July 2009. Because pesticides adhere to sediment, dissolved-phase pesticide concentrations can be overstated in more turbid samples.

2.3 Surface Water and Sediment Sampling

H&H collected stream surface water and sediment samples from Peters Creek more than 48 hours after the last rain event. At DENR's request, H&H collected three surface water samples and four sediment samples. The surface water and sediment samples were collected upgradient, adjacent to and downgradient of the former Wilson Pest Control site (Figure 2). The fourth sediment sample was collected further downgradient of the site at a location near the upgradient end of Hanes Park (Figure 1). H&H collected surface water samples by placing the laboratory vials into the center of the stream surface at an angle with care taken to obtain relatively clear samples. H&H collected the sediment samples from adjacent to the stream channel at approximately 0.5 ft below the surface using a decontaminated stainless steel trowel.

Surface water and sediment samples were analyzed for chlorinated pesticides by EPA Method 8081A. No pesticides were detected in the stream or sediment samples (Table 3 and Appendix B). Based on these data, Peters Creek has not been impacted by the former Wilson Pest Control site.

3.0 Summary

As requested by DENR, H&H collected ground water samples, surface water samples, and sediment samples in July 2009 at the former Wilson Pest Control site in Winston-Salem, NC. Chlorinated pesticides were detected above North Carolina ground water standards, as defined in 15A NCAC 2L regulations, in three of the seven monitoring wells. Chlordane and/or dieldrin were detected in three monitoring wells above ground water standards. No other chlorinated pesticide detections exceeded ground water standards. The ground water plume appears to be located within the boundaries of the subject property.

Ground water samples were collected using HydraSleeve samplers in July 2009 so that hazardous investigation derived purge water would not be generated. Turbidities were higher in the July 2009 samples compared to turbidities obtained in 2007 using low flow purging techniques. H&H believes that the slight increases in concentrations are due in part to the higher turbidity samples taken in July 2009. Because pesticides adhere to sediment, dissolved-phase pesticide concentrations can be overstated in more turbid samples.

H&H collected stream surface water and sediment samples from Peters Creek. At DENR's request, H&H collected three surface water samples and four sediment samples. The surface water and sediment samples were collected upgradient, adjacent to, and downgradient of the former Wilson Pest Control site. The fourth sediment sample was collected further downgradient of the site at a location near the upgradient end of Hanes Park. No chlorinated pesticides were detected in the stream or sediment samples. Based on these data, Peters Creek has not been impacted by the former Wilson Pest Control site.

Table 1
Monitoring Well Construction and Water Level Data Summary
Wilson Pest Control
Winston-Salem, North Carolina
H&H Job No. BDP-003

Monitoring Well ID	Installation Date	Well TOC Elevation (ft)	Well Depth (ft)	Screen Length (ft)	February 16, 2007		July 13, 2009	
					TOC Water Table Depth (ft)	Water Table Elevation (ft)	TOC Water Table Depth (ft)	Water Table Elevation (ft)
MW-1	12/7/2001	810.96	34	10	26.28	784.68	26.43	784.53
MW-2	12/7/2001	799.47	25	10	18.75	780.72	18.79	780.68
MW-3	12/7/2001	799.28	25	10	15.49	783.79	15.58	783.70
MW-4	12/7/2001	794.77	21	10	15.05	779.72	15.14	779.63
MW-5	12/7/2001	793.14	19	10	13.39	779.75	13.65	779.49
MW-6	1/1/2002	799.41	43	5	16.40	783.01	16.17	783.24
MW-7	1/30/2006	793.83	20	10	13.71	780.12	13.80	780.03

Notes:

MW-6 is a Type III monitoring well drilled into bedrock

TOC = Top of well casing

Table 2
Ground Water Analytical Detections
Wilson Pest Control
Winston-Salem, North Carolina
H&H Job No. BDP-003

Sample ID Date Collected	MW-1		MW-2		MW-3			MW-4			MW-5		MW-6		MW-7			2L Standard
	2/21/07	7/23/09	2/16/07	7/23/09	9/15/06	2/16/07	7/23/09	9/15/06	2/16/07	7/23/09	2/16/07	7/23/09	2/16/07	7/23/09	9/15/06	2/16/07	7/23/09	
<u>Field Turbidity (NTUs)</u>	**	1100	3.21	38.19	12.06	3.31	880.9	2.65	2.16	33.5	2.23	122.7	1.36	3.78	9.45	5.73	194.3	Not Applicable
<u>OCPs (8081A)</u>																		
alpha-Chlordane	<0.05	<0.05	<0.05	<0.05	0.087	0.0940	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.446	0.494	<0.05	NS
gamma-Chlordane	<0.05	<0.05	<0.05	<0.05	0.121	0.126	0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.453	0.547	<0.05	NS
Chlordane	<0.05	<0.5	<0.05	<0.5	1.13	1.16	1.60	<0.05	<0.05	<0.5	<0.05	<0.5	<0.05	<0.5	5.25	5.02	<0.5	0.1
Dieldrin	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	0.22	<0.1	<0.1	0.27	<0.1	<0.05	<0.1	<0.05	8.34	6.97	6.7	0.0022
Endrin ketone	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.05	1.47	<0.1	<0.05	<0.1	<0.05	<0.1	<0.05	0.79	1.32	1.5	2.1
Endrin	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	0.14	<0.1	<0.05	NS	<0.05	<0.1	<0.1	0.14	2

Notes:

All units are µg/l; The number in parenthesis is the EPA Analytical Method

GW = Ground Water; OCPs = Organochlorine Pesticides; NS = Not Specified

Bold indicates exceeds ground water standard

**Turbidity meter malfunctioned, sample was field filtered using 0.45 micron filter because peristaltic pump could not be used for purging.

Samples were taken on 7/23/09 with Hydrasleeve no purge sampling technology

Table 3
Peter's Creek Surface Water and Sediment Data Summary
Wilson Pest Control
Winston-Salem, North Carolina
H&H Job No. BDP-003

Date Collected	Surface Water (µg/l)					
	PCS-1W		PCS-2W		PCS-3W	
	2/16/07	7/23/09	2/16/07	7/23/09	2/16/07	7/23/09
<u>Field Turbidity (NTUs)</u>	3.25	NA	3.52	NA	10.53	NA
<u>OCPs (8081A)</u>	ND	ND	ND	ND	ND	ND

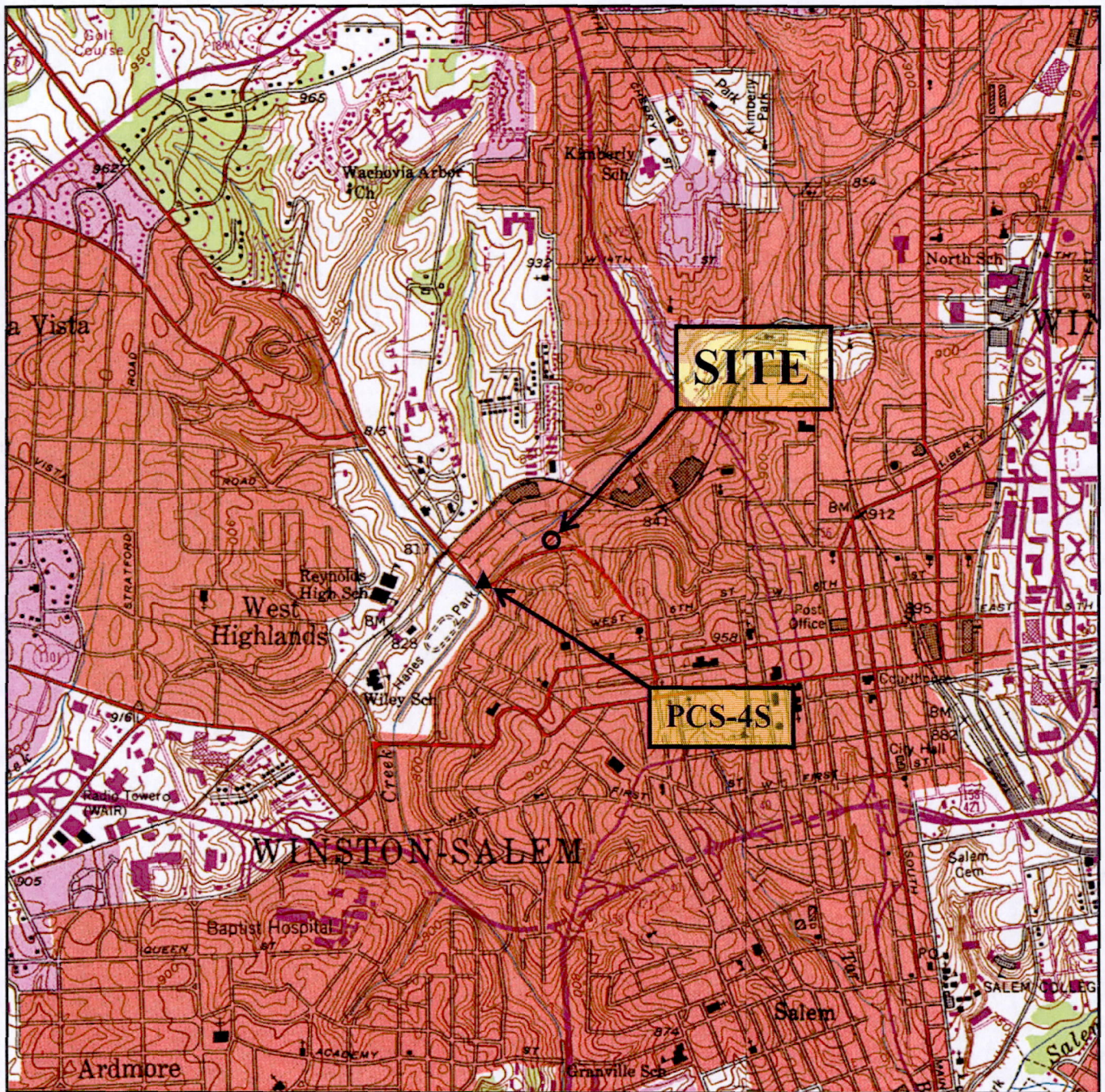
Date Collected	Sediment (µg/kg)							
	PCS-1S		PCS-2S		PCS-3S		PCS-4S	
	2/16/07	7/23/09	2/16/07	7/23/09	2/16/07	7/23/09	2/16/07	7/23/09
<u>OCPs (8081A)</u>	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

The number in parenthesis is the EPA Analytical Method

GW = Ground Water; OCPs = Organochlorine Pesticides; NS = Not Specified


ND = No OCPs detected; NA = Not Analyzed

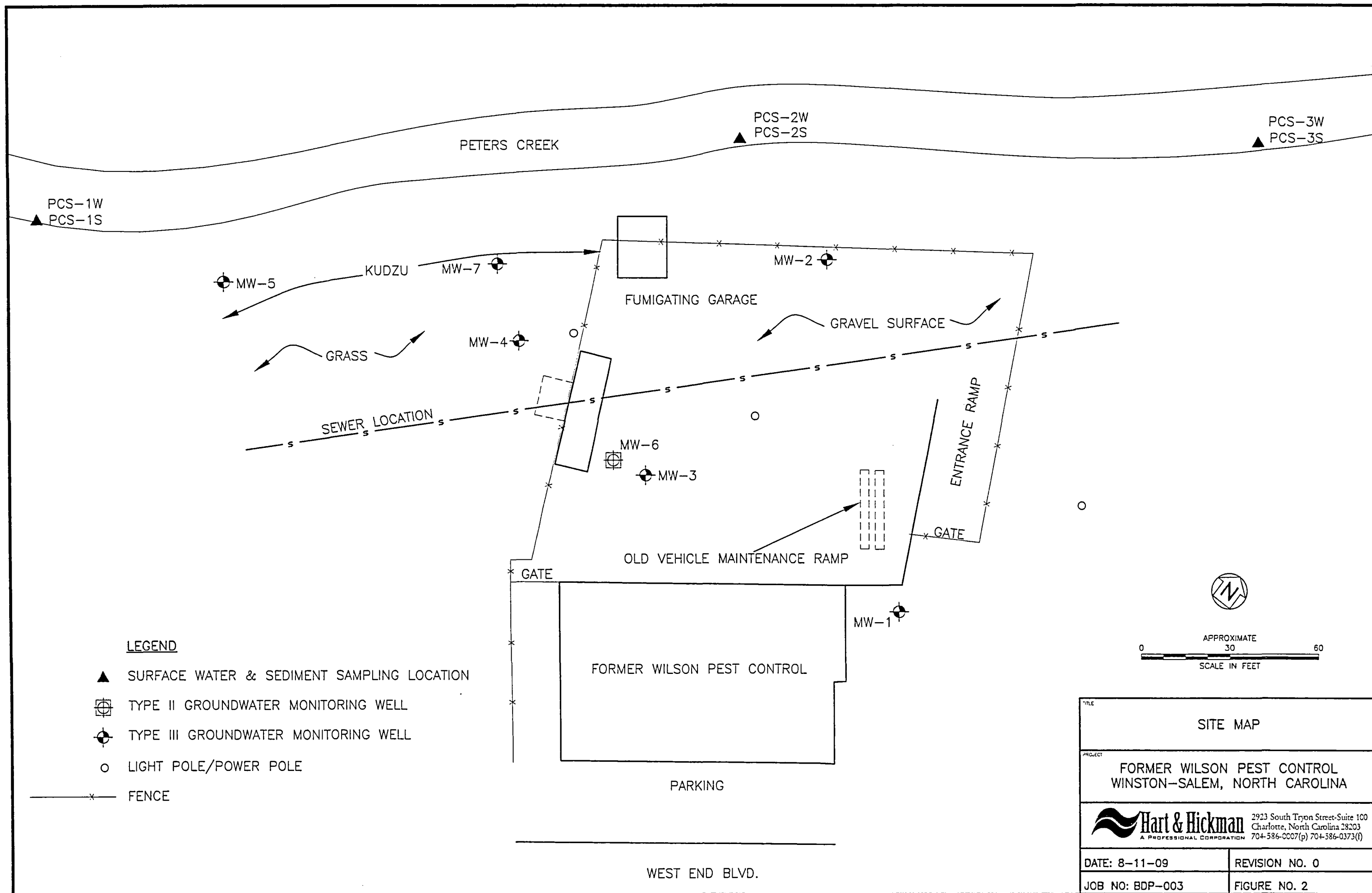



APPROXIMATE
0 2000 4000
SCALE IN FEET

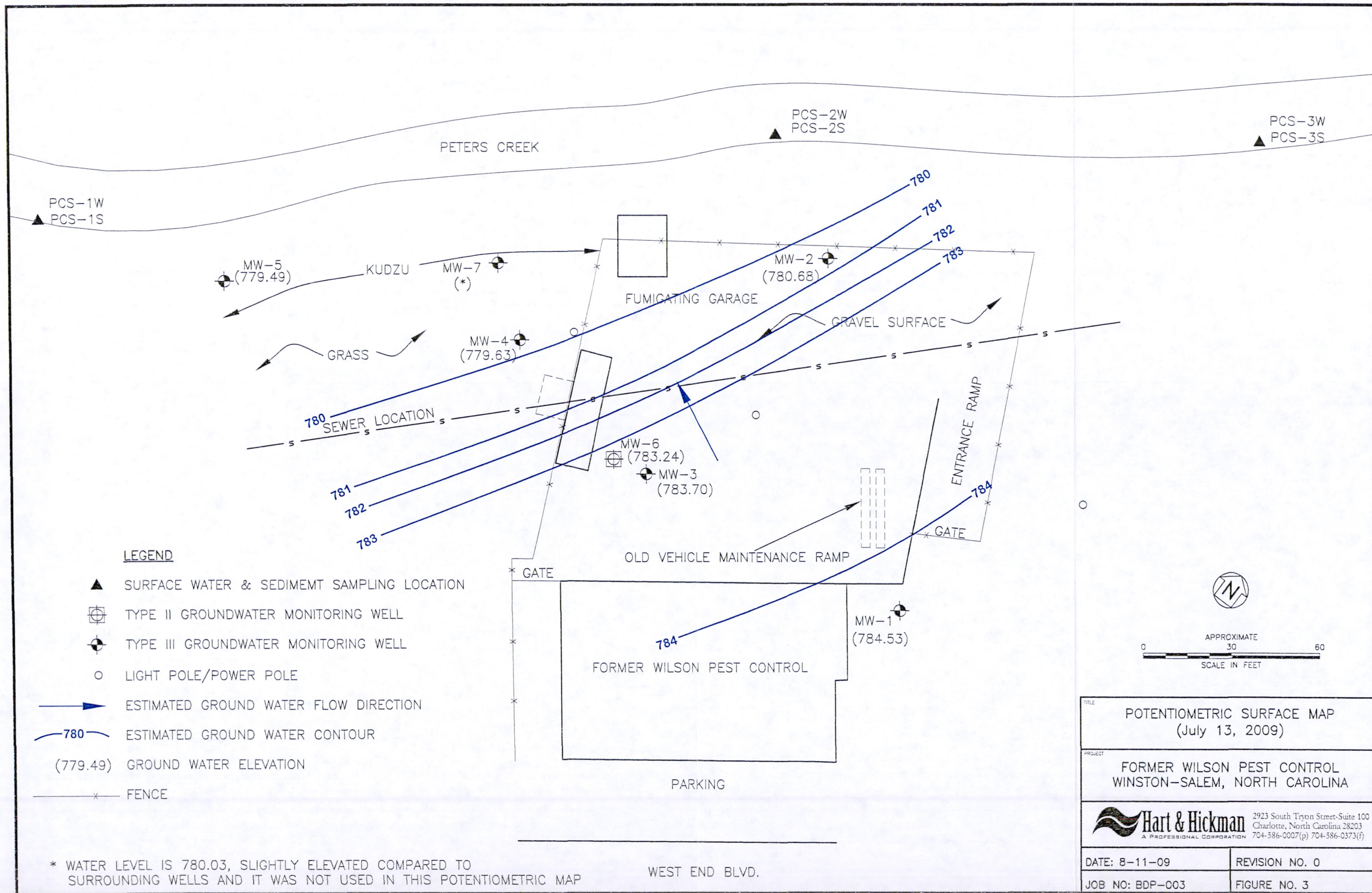
U.S.G.S. QUADRANGLE MAP
WINSTON SALEM WEST N.C. 1950
PHOTOREVISED 1994
WINSTON SALEM EAST N.C. 1950
PHOTOREVISED 1994

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

TITLE		SITE LOCATION MAP	
PROJECT		FORMER WILSON PEST CONTROL SITE WINSTON-SALEM, NORTH CAROLINA	
		 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 A PROFESSIONAL CORPORATION 704-586-0007 (p) 704-586-0373 (f)	
DATE:	8/11/09	REVISION NO:	0
JOB NO:	BDP-003	FIGURE NO:	1



TITLE SITE MAP	
PROJECT FORMER WILSON PEST CONTROL WINSTON-SALEM, NORTH CAROLINA	
 <div> 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-386-0007(p) 704-386-0373(f) </div>	
DATE: 8-11-09	REVISION NO. 0
JOB NO: BDP-003	FIGURE NO. 2



PETERS CREEK

MW-5
(<0.5)

KUDZU

MW-7
(<0.5)

MW-2
(<0.5)

FUMIGATING GARAGE

GRAVEL SURFACE

GRASS

MW-4
(<0.5)

MW-6

MW-3
(1.6)

0.1

OLD VEHICLE MAINTENANCE RAMP

ENTRANCE RAMP

GATE

GATE

MW-1
(<0.5)

FORMER WILSON PEST CONTROL

PARKING

WEST END BLVD.

LEGEND



TYPE II GROUNDWATER MONITORING WELL



TYPE II GROUNDWATER MONITORING WELL



LIGHT/POLE/POWER POLE

0.1

ESTIMATED CHLORDANE ISOCONCENTRATION
CONTOUR ($\mu\text{g/L}$)

(1.6) CHLORDANE CONCENTRATION ($\mu\text{g/L}$)

x FENCE



0 30 60
APPROXIMATE
SCALE IN FEET

CHLORDANE ISOCONCENTRATION MAP

FORMER WILSON PEST CONTROL
WINSTON-SALEM, NORTH CAROLINA

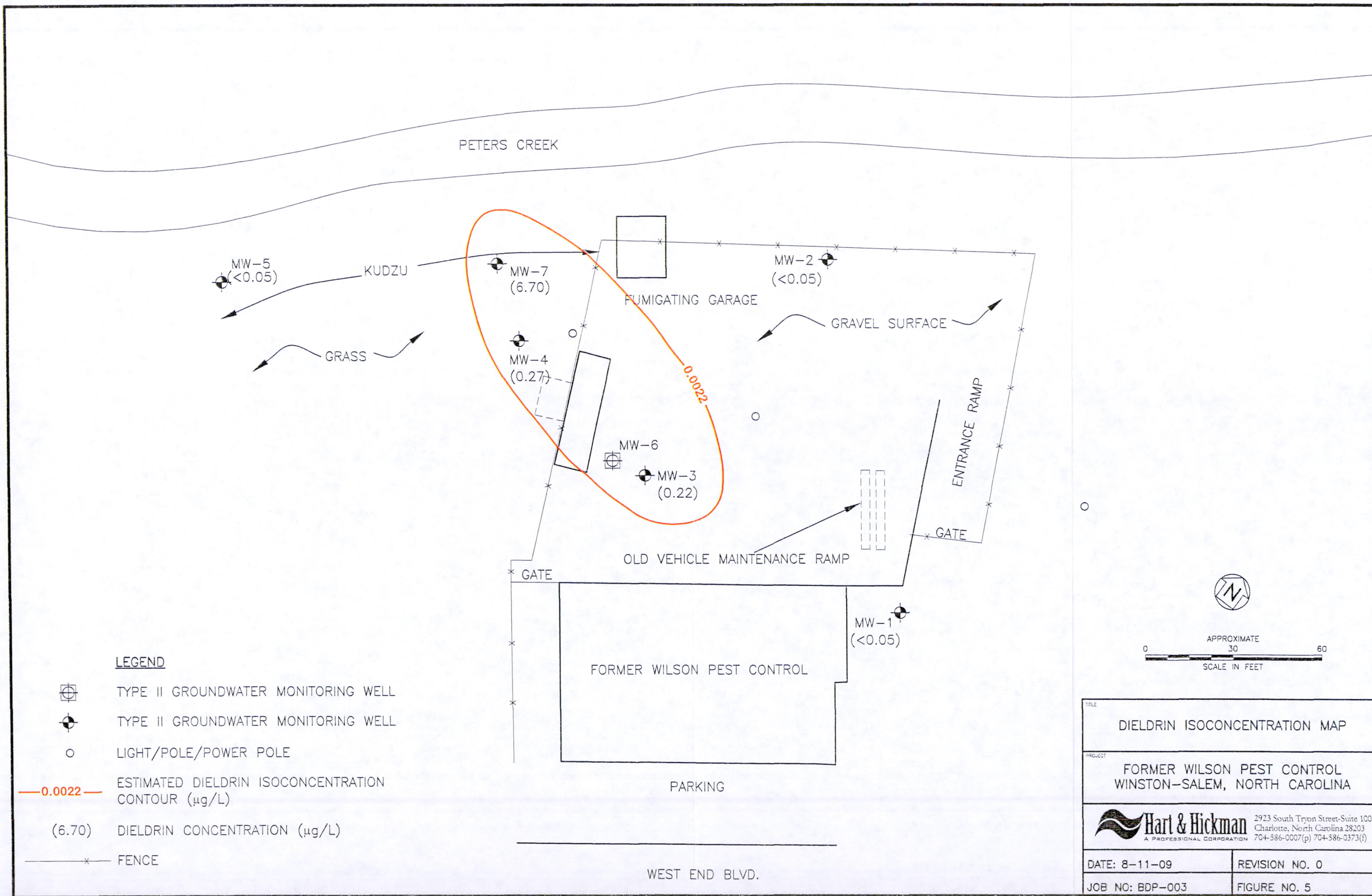
Hart & Hickman
A PROFESSIONAL CORPORATION
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)


DATE: 8-11-09

REVISION NO. 0

JOB NO: BDP-003

FIGURE NO. 4



TITLE	
DIELDRIN ISOCONCENTRATION MAP	
PROJECT	
FORMER WILSON PEST CONTROL WINSTON-SALEM, NORTH CAROLINA	
 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-386-0007(p) 704-386-0373(f)	
DATE: 8-11-09	REVISION NO. 0
JOB NO: BDP-003	FIGURE NO. 5



Appendix A
ITRC Information on HydraSleeve Samplers



Technology Overview

Technology Overview of Passive Sampler Technologies



March 2006

Prepared by
The Interstate Technology & Regulatory Council
Diffusion Sampler Team

1.2 Diffusion Sampler Information Center (DSIC)

The DSIC Web site (<http://ds.itrcweb.org/>) is maintained by the ITRC Diffusion Sampler Team to provide a centralized location for posting and exchanging information on the development and use of diffusion samplers. The Diffusion Sampler Team includes representatives from the U.S. Air Force, U.S. Navy, U.S. Environmental Protection Agency (EPA), U.S. Geological Survey, U.S. Army Corps of Engineers, private industry, and multiple state agencies. The team works to compile, analyze, and disseminate information on the deployment of PDB samplers on a national basis. Site users can access a current listing of deployments nationwide, news updates, and basic information on PDB sampling. The DSIC also provides technical information and news on a variety of passive sampler technologies.

1.3 Passive Samplers Discussion Group

The Passive Samplers discussion group is a global forum for discussing passive (non-purge) sampling devices for groundwater and surface water environments. The intent is to provide information on innovative sampling technologies and encourage active interchange between researchers, practitioners, and regulators who deal with environmental sampling. The success of this discussion group relies on member participation, so we welcome anyone with experience or interest in this topic. Please pass an invitation along to your colleagues.

To join the list, send an email to LISTSERV@LISTSERV.WPI.ORG with a blank subject line and the following information in the message area: subscribe PASSIVE_SAMPLERS. You may choose to no longer participate on the listserve at any time by following the directions you will receive after joining the list.

2. HYDRASLEEVE™ SAMPLERS

2.1 Description and Application

The HydraSleeve™ groundwater sampler was developed in 1999 and is designed to recover groundwater samples from monitoring wells without purging. It can be used to sample a wide spectrum of analytes (e.g., VOCs, semi-volatile organics, metals) and can also be used to sample low-yielding wells. The HydraSleeve™ allows one to recover a discrete sample from the screened zone where the sampler is activated, with no drawdown and minimal agitation of the water column. The reed valve design keeps the device closed except during sample collection, thereby assuring that the sample is collected from the desired interval within the screened zone.

2.1.1 Physical Characteristics

HydraSleeve™ samplers consist of three basic components: a reusable weight; a long, flexible, lay-flat sample sleeve (usually made of polyethylene); and a self-sealing valve. The bottom of the flexible tube is sealed and the weight is attached to it. The valve is located at the top of the lay-flat sample sleeve and includes an attachment point for the suspension line.

Collecting a sample with the HydraSleeve™ is a simple, one-person operation. The sampler is deployed attaching a suspension cord to the top and a weight to the bottom and lowering the empty sampler into the well. During installation, hydrostatic pressure causes the sampler to retain its flat and empty profile for an indefinite period prior to sample collection. After lowering the sampler to the desired sample depth, the water column is allowed to equilibrate. Its slim cross section minimizes the disturbance to the water column during placement, reducing the time needed for the well to return to equilibrium. To initiate sample collection the HydraSleeve™ is pulled upward through the sample zone at one foot per second or faster. As it moves upward, the valve at the top opens and the sleeve is pulled over a “core” of water. As the fluid is captured, the sleeve expands to contain the sample, similar to pulling on a sock. Because there is no pumping or water withdrawal there is no drawdown and only minimal agitation of the water column. Once the sample sleeve is full, the self-sealing valve closes, preventing loss of the sample or the entry of extraneous fluid as the HydraSleeve™ is recovered. At the surface, the HydraSleeve™ is punctured with the pointed discharge straw and the sample transferred to suitable containers for transport to the laboratory. The HydraSleeve™ can be made different lengths and diameters to accommodate various well diameters and volume requirements. To save time waiting for equilibrium during repetitive sampling events, a sealed HydraSleeve™ can be left in the well between sampling events. To test for vertical stratification within a well, multiple HydraSleeve™ samplers can be suspended on the same cable and deployed simultaneously. Additional instructions on the use of the HydraSleeve™ are presented in the *HydraSleeve™ Field Manual*, available through the vendors.

2.1.2 Target Media

The HydraSleeve™ sampler can sample most liquid media but was specifically designed to collect groundwater samples from a discrete interval in monitoring or water wells. By collecting a discrete interval water sample, the HydraSleeve™ can sample all groundwater analytes as long as an adequate volume of sample is recovered for analysis.

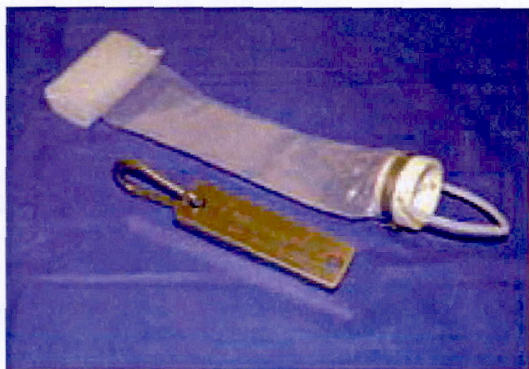


Figure 2-1. 1.5-inch HydraSleeve™ and stainless steel weight (1-liter capacity)



Figure 2-2. Full 1.5-inch HydraSleeve™ (1 liter capacity)

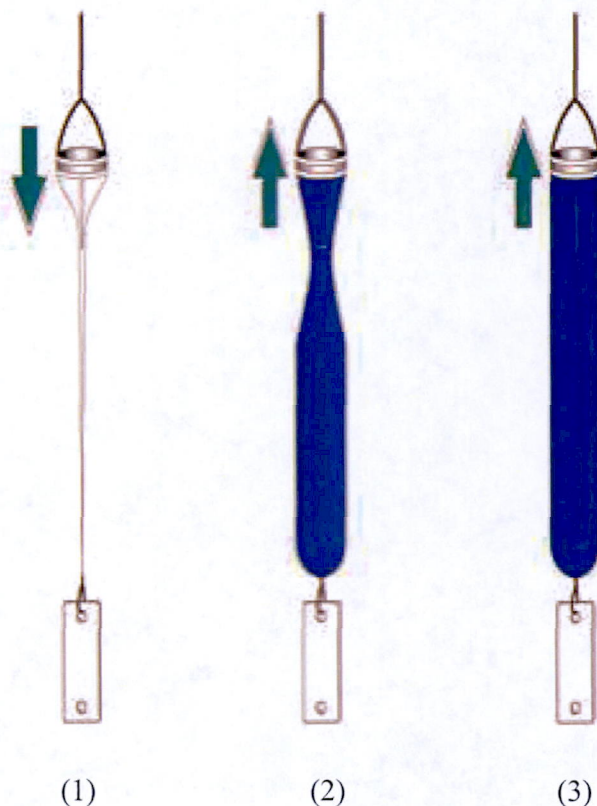


Figure 2-3. Deployment and retrieval

(1) Sampler placement

Reusable weight is attached and the HydraSleeve™ is lowered and placed at the desired position in the well screen. In-situ water pressure keeps the reed valve closed, preventing water from entering the sampler. Well is allowed to return to equilibrium.

(2) Sample collection

The reed valve opens to allow filling when the sampler is moved upward faster than 1 foot per second, either in one continuous upward pull or by cycling the sampler up and down to sample a shorter interval. There is no change in water level, and only minimal agitation during collection.

(3) Sample retrieval

When the flexible sleeve is full, the reed valve closes and the sampler can be recovered without entry of extraneous overlying fluids. Samples are removed by puncturing the sleeve with the pointed discharge tube and draining the contents into sample containers or field filtration equipment.

2.1.3 Potential Analyte Capabilities

As mentioned above, the HydraSleeve™ can sample all groundwater analytes as long as an adequate volume of sample is recovered for analysis. The HydraSleeve™ can be used to sample a wide spectrum of analytes including but not limited to the following: VOCs, semi-volatile organics, metals, major cations and anions, dissolved trace metals, dissolved sulfide, dissolved gases (methane/ethene/carbon dioxide), total dissolved solids, dissolved organic carbon, dissolved silica, explosive compounds, and perchlorate.

2.1.4 Sample Volume

Volume varies with the diameter and length of the HydraSleeve™. Standard HydraSleeve™ samplers are sized to fit in 2-inch wells—1.5-inch outside diameter (OD) by 36-inches long—and 4-inch wells (2.5-inch OD by 24-inches long). The standard 1.5-inch sampler holds 1-liter and the 2.5-inch sampler holds 2-liters of sample. HydraSleeve™ samplers can be custom fabricated in varying lengths and diameters for specific volume requirements. Overall, the HydraSleeve™ samplers have been made to obtain sample volume ranging from 80 milliliters to more than 4 liters.

2.2 State of the Art

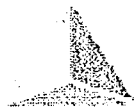
2.2.1 Lab Testing

Laboratory testing for chemical parameters has shown excellent correlation with control samples for those compounds tested. Additional project sites are needed for testing additional parameters. The U.S. Army Core of Engineers Cold Regions Research and Engineering Laboratory (CRREL) conducted a detailed performance study comparing the results of the HydraSleeve™ and other sampling devices to control samples collected out of a standpipe with spiked concentrations of various contaminants (Parker and Clark, 2002). Parameters included volatile organic compounds, explosives, pesticides, and inorganic compounds. The HydraSleeve™ samples varied less than 5 percent from the control samples for all parameters, showing no adverse impact in the standpipe from the sample collection method.

2.2.2 Field Testing

The most comprehensive field test to date is a comparison demonstration project conducted at the former McClellan Air Force Base in Sacramento, California. The final McClellan report, (Parsons, 2005), describes the results of a field demonstration of six “no-purge” groundwater sampling devices. Analyses of VOCs, metals, anions, and 1,4 dioxane concentrations were compared to those collected from low-flow and conventional three-well-volume purge samples from the same well. From a performance perspective the report concluded that the HydraSleeve™ typically produced results most similar to the more conservative (i.e. higher concentration) results obtained from the conventional and low-flow sampling methods. The HydraSleeve™ was also the least expensive sampler tested. It was simpler to deploy and retrieve, and permitted a larger volume of water to be collected. Of the six no-purge devices tested, the HydraSleeve™ was also the only one that delivered viable samples for all of the

Appendix B
Laboratory Analytical Data



PRISM
LABORATORIES, INC.

Case Narrative

Date: 08/05/09
Company: Hart & Hickman
Contact: Matt Bramblett
Address: 2923 South Tryon St. Ste 100
Charlotte, NC 28203

Client Project ID: BDP-003 Wilson Pest Defense
Prism COC Group No: G0709702
Collection Date(s): 07/23/09
Lab Submittal Date(s): 07/24/09

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 33 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

No Anomalies Reported

Volatile Analysis

N/A

Metals Analysis

N/A

Wet Lab and Micro Analysis

N/A

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Robbi A. Jones

Project Manager: Angela D. Overcash

Signature: 

Signature: 

Review Date: 08/05/09

Approval Date: 08/05/09

Data Qualifiers Key Reference:

B: Compound also detected in the method blank.

#: Result outside of the QC limits.

DO: Compound diluted out.

E: Estimated concentration, calibration range exceeded.

J: The analyte was positively identified but the value is estimated below the reporting limit.

H: Estimated concentration with a high bias.

L: Estimated concentration with a low bias.

M: A matrix effect is present.

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Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-1
Prism Sample ID: 253101
COC Group: G0709702
Time Collected: 07/23/09 10:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 11:56 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 11:56 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 11:56 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 11:56 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 11:56 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 11:56 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 11:56 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 11:56 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 11:56 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 11:56 jvogel		Q43464
Dieldrin	BRL	µg/L	0.050	0.0043	1	8081A	08/01/09 11:56 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 11:56 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 11:56 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 11:56 jvogel		Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 11:56 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 11:56 jvogel		Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 11:56 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 11:56 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 11:56 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 11:56 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 11:56 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 11:56 jvogel		Q43464

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Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-1
Prism Sample ID: 253101
COC Group: G0709702
Time Collected: 07/23/09 10:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				900 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200
				Surrogate		% Recovery		Control Limits	
				Tetrachloro-m-xylene (TCMX)		95		40 - 134	
				Decachlorobiphenyl (DCB)		68		13 - 186	

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services

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Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-2
Prism Sample ID: 253102
COC Group: G0709702
Time Collected: 07/23/09 11:00
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 12:38 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 12:38 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 12:38 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 12:38 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 12:38 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 12:38 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 12:38 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 12:38 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 12:38 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 12:38 jvogel		Q43464
Dieldrin	BRL	µg/L	0.050	0.0043	1	8081A	08/01/09 12:38 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 12:38 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 12:38 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 12:38 jvogel		Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 12:38 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 12:38 jvogel		Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 12:38 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 12:38 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 12:38 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 12:38 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 12:38 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 12:38 jvogel		Q43464

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Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-2
Prism Sample ID: 253102
COC Group: G0709702
Time Collected: 07/23/09 11:00
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				1000 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	96	40 - 134
Decachlorobiphenyl (DCB)	86	13 - 186

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

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Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-3
Prism Sample ID: 253103
COC Group: G0709702
Time Collected: 07/23/09 11:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 13:19	jvogel	Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 13:19	jvogel	Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 13:19	jvogel	Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 13:19	jvogel	Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 13:19	jvogel	Q43464
a-Chlordane	0.22	µg/L	0.050	0.0039	1	8081A	08/01/09 13:19	jvogel	Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 13:19	jvogel	Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 13:19	jvogel	Q43464
Chlordane	1.6	µg/L	0.50	0.16	1	8081A	08/01/09 13:19	jvogel	Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 13:19	jvogel	Q43464
Dieldrin	0.22	µg/L	0.050	0.0043	1	8081A	08/01/09 13:19	jvogel	Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 13:19	jvogel	Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 13:19	jvogel	Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 13:19	jvogel	Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 13:19	jvogel	Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 13:19	jvogel	Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 13:19	jvogel	Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 13:19	jvogel	Q43464
g-Chlordane	0.25	µg/L	0.050	0.0050	1	8081A	08/01/09 13:19	jvogel	Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 13:19	jvogel	Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 13:19	jvogel	Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 13:19	jvogel	Q43464

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NC Certification No. 402
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NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-3
Prism Sample ID: 253103
COC Group: G0709702
Time Collected: 07/23/09 11:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample Preparation:				1000 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200
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Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	93	40 - 134
Decachlorobiphenyl (DCB)	84	13 - 186

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services

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Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-4
Prism Sample ID: 253104
COC Group: G0709702
Time Collected: 07/23/09 12:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 14:01 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 14:01 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 14:01 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 14:01 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 14:01 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 14:01 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 14:01 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 14:01 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 14:01 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 14:01 jvogel		Q43464
Dieldrin	0.27	µg/L	0.050	0.0043	1	8081A	08/01/09 14:01 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 14:01 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 14:01 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 14:01 jvogel		Q43464
Endrin	0.14	µg/L	0.050	0.022	1	8081A	08/01/09 14:01 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 14:01 jvogel		Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 14:01 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 14:01 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 14:01 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 14:01 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 14:01 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 14:01 jvogel		Q43464

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NC Certification No. 402
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Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-4
Prism Sample ID: 253104
COC Group: G0709702
Time Collected: 07/23/09 12:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				950 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	98	40 - 134
Decachlorobiphenyl (DCB)	100	13 - 186

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-5
Prism Sample ID: 253105
COC Group: G0709702
Time Collected: 07/23/09 13:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Organochlorine Pesticides by GC/ECD</u>									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 14:43 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 14:43 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 14:43 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 14:43 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 14:43 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 14:43 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 14:43 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 14:43 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 14:43 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 14:43 jvogel		Q43464
Dieldrin	BRL	µg/L	0.050	0.0043	1	8081A	08/01/09 14:43 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 14:43 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 14:43 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 14:43 jvogel		Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 14:43 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 14:43 jvogel		Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 14:43 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 14:43 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 14:43 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 14:43 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 14:43 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 14:43 jvogel		Q43464

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-5
Prism Sample ID: 253105
COC Group: G0709702
Time Collected: 07/23/09 13:30
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				1000 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200
Surrogate		% Recovery		Control Limits					
Tetrachloro-m-xylene (TCMX)		94		40 - 134					
Decachlorobiphenyl (DCB)		89		13 - 186					

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-6
Prism Sample ID: 253106
COC Group: G0709702
Time Collected: 07/23/09 12:00
Time Submitted: 07/24/09 9:55

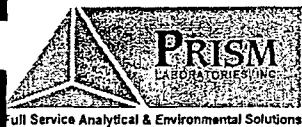
Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 15:24 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 15:24 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 15:24 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 15:24 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 15:24 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 15:24 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 15:24 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 15:24 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 15:24 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 15:24 jvogel		Q43464
Dieldrin	BRL	µg/L	0.050	0.0043	1	8081A	08/01/09 15:24 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 15:24 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 15:24 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 15:24 jvogel		Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 15:24 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 15:24 jvogel		Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 15:24 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 15:24 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 15:24 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 15:24 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 15:24 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 15:24 jvogel		Q43464

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-6
Prism Sample ID: 253106
COC Group: G0709702
Time Collected: 07/23/09 12:00
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				980 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	86	40 - 134
Decachlorobiphenyl (DCB)	60	13 - 186

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-7
Prism Sample ID: 253107
COC Group: G0709702
Time Collected: 07/23/09 13:00
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 16:06 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 16:06 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 16:06 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 16:06 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 16:06 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 16:06 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 16:06 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 16:06 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 16:06 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 16:06 jvogel		Q43464
Dieldrin	6.7	µg/L	0.25	0.022	5	8081A	08/03/09 11:15 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 16:06 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 16:06 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 16:06 jvogel		Q43464
Endrin	0.14	µg/L	0.050	0.022	1	8081A	08/01/09 16:06 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 16:06 jvogel		Q43464
Endrin Ketone	1.5	µg/L	0.050	0.013	1	8081A	08/01/09 16:06 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 16:06 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 16:06 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 16:06 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 16:06 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 16:06 jvogel		Q43464

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: MW-7
Prism Sample ID: 253107
COC Group: G0709702
Time Collected: 07/23/09 13:00
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				980 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	97	40 - 134
Decachlorobiphenyl (DCB)	79	13 - 186

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Soil

Client Sample ID: PCS-4S
Prism Sample ID: 253108
COC Group: G0709702
Time Collected: 07/23/09 15:35
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	72.8	%			1	SM2540 G	07/29/09 16:00	mbarber	
<u>Organochlorine Pesticides by Gas Chromatography</u>									
4,4'-DDD	BRL	µg/kg	14	3.9	5	8081A	08/01/09 23:43	jvogel	Q43458
4,4'-DDE	BRL	µg/kg	14	4.6	5	8081A	08/01/09 23:43	jvogel	Q43458
4,4'-DDT	BRL	µg/kg	21	3.4	5	8081A	08/01/09 23:43	jvogel	Q43458
4,4'-Methoxychlor	BRL	µg/kg	14	4.1	5	8081A	08/01/09 23:43	jvogel	Q43458
a-BHC	BRL	µg/kg	14	3.0	5	8081A	08/01/09 23:43	jvogel	Q43458
a-Chlordane	BRL	µg/kg	14	4.1	5	8081A	08/01/09 23:43	jvogel	Q43458
Aldrin	BRL	µg/kg	14	3.0	5	8081A	08/01/09 23:43	jvogel	Q43458
b-BHC	BRL	µg/kg	14	3.8	5	8081A	08/01/09 23:43	jvogel	Q43458
Chlordane	BRL	µg/kg	340	32	5	8081A	08/01/09 23:43	jvogel	Q43458
d-BHC	BRL	µg/kg	14	3.0	5	8081A	08/01/09 23:43	jvogel	Q43458
Dieldrin	BRL	µg/kg	14	4.3	5	8081A	08/01/09 23:43	jvogel	Q43458
Endosulfan I	BRL	µg/kg	14	4.1	5	8081A	08/01/09 23:43	jvogel	Q43458
Endosulfan II	BRL	µg/kg	14	3.0	5	8081A	08/01/09 23:43	jvogel	Q43458
Endosulfan Sulfate	BRL	µg/kg	14	4.5	5	8081A	08/01/09 23:43	jvogel	Q43458
Endrin	BRL	µg/kg	14	4.3	5	8081A	08/01/09 23:43	jvogel	Q43458
Endrin Aldehyde	BRL	µg/kg	14	4.2	5	8081A	08/01/09 23:43	jvogel	Q43458
Endrin Ketone	BRL	µg/kg	14	3.9	5	8081A	08/01/09 23:43	jvogel	Q43458
g-BHC	BRL	µg/kg	14	2.7	5	8081A	08/01/09 23:43	jvogel	Q43458
g-Chlordane	BRL	µg/kg	14	3.5	5	8081A	08/01/09 23:43	jvogel	Q43458
Heptachlor	BRL	µg/kg	14	2.7	5	8081A	08/01/09 23:43	jvogel	Q43458
Heptachlor Epoxide	BRL	µg/kg	14	3.2	5	8081A	08/01/09 23:43	jvogel	Q43458
Toxaphene	BRL	µg/kg	340	35	5	8081A	08/01/09 23:43	jvogel	Q43458

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Soil

Client Sample ID: PCS-4S
Prism Sample ID: 253108
COC Group: G0709702
Time Collected: 07/23/09 15:35
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample was diluted 5x due to the matrix.

Sample Preparation: 30.33 g / 10 mL 3550B 07/28/09 10:00 cdaly P25170

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	95	40 - 162
Decachlorobiphenyl (DCB)	109	26 - 204

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: PCS-3W
Prism Sample ID: 253109
COC Group: G0709702
Time Collected: 07/23/09 14:15
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 20:16 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 20:16 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 20:16 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 20:16 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 20:16 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 20:16 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 20:16 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 20:16 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 20:16 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 20:16 jvogel		Q43464
Dieldrin	BRL	µg/L	0.050	0.0043	1	8081A	08/01/09 20:16 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 20:16 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 20:16 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 20:16 jvogel		Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 20:16 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 20:16 jvogel		Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 20:16 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 20:16 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 20:16 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 20:16 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 20:16 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 20:16 jvogel		Q43464

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: PCS-3W
Prism Sample ID: 253109
COC Group: G0709702
Time Collected: 07/23/09 14:15
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				1000 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200
		Surrogate	% Recovery		Control Limits				
		Tetrachloro-m-xylene (TCMX)	89		40 - 134				
		Decachlorobiphenyl (DCB)	97		13 - 186				

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Soil

Client Sample ID: PCS-3S
Prism Sample ID: 253110
COC Group: G0709702
Time Collected: 07/23/09 14:20
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	71.7	%			1	SM2540 G	07/29/09 16:00	mbarber	
Organochlorine Pesticides by Gas Chromatography									
4,4'-DDD	BRL	µg/kg	14	3.9	5	8081A	08/02/09 0:25	jvogel	Q43458
4,4'-DDE	BRL	µg/kg	14	4.7	5	8081A	08/02/09 0:25	jvogel	Q43458
4,4'-DDT	BRL	µg/kg	21	3.4	5	8081A	08/02/09 0:25	jvogel	Q43458
4,4'-Methoxychlor	BRL	µg/kg	14	4.1	5	8081A	08/02/09 0:25	jvogel	Q43458
a-BHC	BRL	µg/kg	14	3.1	5	8081A	08/02/09 0:25	jvogel	Q43458
a-Chlordane	BRL	µg/kg	14	4.2	5	8081A	08/02/09 0:25	jvogel	Q43458
Aldrin	BRL	µg/kg	14	3.1	5	8081A	08/02/09 0:25	jvogel	Q43458
b-BHC	BRL	µg/kg	14	3.9	5	8081A	08/02/09 0:25	jvogel	Q43458
Chlordane	BRL	µg/kg	350	33	5	8081A	08/02/09 0:25	jvogel	Q43458
d-BHC	BRL	µg/kg	14	3.1	5	8081A	08/02/09 0:25	jvogel	Q43458
Dieldrin	BRL	µg/kg	14	4.4	5	8081A	08/02/09 0:25	jvogel	Q43458
Endosulfan I	BRL	µg/kg	14	4.1	5	8081A	08/02/09 0:25	jvogel	Q43458
Endosulfan II	BRL	µg/kg	14	3.1	5	8081A	08/02/09 0:25	jvogel	Q43458
Endosulfan Sulfate	BRL	µg/kg	14	4.5	5	8081A	08/02/09 0:25	jvogel	Q43458
Endrin	BRL	µg/kg	14	4.3	5	8081A	08/02/09 0:25	jvogel	Q43458
Endrin Aldehyde	BRL	µg/kg	14	4.3	5	8081A	08/02/09 0:25	jvogel	Q43458
Endrin Ketone	BRL	µg/kg	14	3.9	5	8081A	08/02/09 0:25	jvogel	Q43458
g-BHC	BRL	µg/kg	14	2.8	5	8081A	08/02/09 0:25	jvogel	Q43458
g-Chlordane	BRL	µg/kg	14	3.5	5	8081A	08/02/09 0:25	jvogel	Q43458
Heptachlor	BRL	µg/kg	14	2.8	5	8081A	08/02/09 0:25	jvogel	Q43458
Heptachlor Epoxide	BRL	µg/kg	14	3.2	5	8081A	08/02/09 0:25	jvogel	Q43458
Toxaphene	BRL	µg/kg	350	36	5	8081A	08/02/09 0:25	jvogel	Q43458

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Soil

Client Sample ID: PCS-3S
Prism Sample ID: 253110
COC Group: G0709702
Time Collected: 07/23/09 14:20
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample was diluted 5x due to the matrix.

Sample Preparation:

30 g / 10 mL 3550B 07/28/09 10:00 cdaly P25170

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	94	40 - 162
Decachlorobiphenyl (DCB)	105	26 - 204

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
 Attn: Matt Bramblett
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
 Defense
 Sample Matrix: Water

Client Sample ID: PCS-2W
 Prism Sample ID: 253111
 COC Group: G0709702
 Time Collected: 07/23/09 14:40
 Time Submitted: 07/24/09 9:55

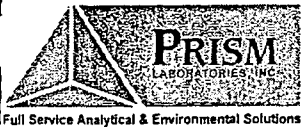
Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 20:57	jvogel	Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 20:57	jvogel	Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 20:57	jvogel	Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 20:57	jvogel	Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 20:57	jvogel	Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 20:57	jvogel	Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 20:57	jvogel	Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 20:57	jvogel	Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 20:57	jvogel	Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 20:57	jvogel	Q43464
Dieldrin	BRL	µg/L	0.050	0.0043	1	8081A	08/01/09 20:57	jvogel	Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 20:57	jvogel	Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 20:57	jvogel	Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 20:57	jvogel	Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 20:57	jvogel	Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 20:57	jvogel	Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 20:57	jvogel	Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 20:57	jvogel	Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 20:57	jvogel	Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 20:57	jvogel	Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 20:57	jvogel	Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 20:57	jvogel	Q43464

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: PCS-2W
Prism Sample ID: 253111
COC Group: G0709702
Time Collected: 07/23/09 14:40
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample Preparation:				1000 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200
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Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	89	40 - 134
Decachlorobiphenyl (DCB)	93	13 - 186

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
 Attn: Matt Bramblett
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
 Defense
 Sample Matrix: Soil

Client Sample ID: PCS-2S
 Prism Sample ID: 253112
 COC Group: G0709702
 Time Collected: 07/23/09 14:45
 Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	70.1	%			1	SM2540 G	07/29/09 16:00	mbarber	
<u>Organochlorine Pesticides by Gas Chromatography</u>									
4,4'-DDD	BRL	µg/kg	14	4.0	5	8081A	08/02/09 1:07	jvogel	Q43458
4,4'-DDE	BRL	µg/kg	14	4.8	5	8081A	08/02/09 1:07	jvogel	Q43458
4,4'-DDT	BRL	µg/kg	21	3.5	5	8081A	08/02/09 1:07	jvogel	Q43458
4,4'-Methoxychlor	BRL	µg/kg	14	4.2	5	8081A	08/02/09 1:07	jvogel	Q43458
a-BHC	BRL	µg/kg	14	3.1	5	8081A	08/02/09 1:07	jvogel	Q43458
a-Chlordane	BRL	µg/kg	14	4.3	5	8081A	08/02/09 1:07	jvogel	Q43458
Aldrin	BRL	µg/kg	14	3.1	5	8081A	08/02/09 1:07	jvogel	Q43458
b-BHC	BRL	µg/kg	14	4.0	5	8081A	08/02/09 1:07	jvogel	Q43458
Chlordane	BRL	µg/kg	360	34	5	8081A	08/02/09 1:07	jvogel	Q43458
d-BHC	BRL	µg/kg	14	3.1	5	8081A	08/02/09 1:07	jvogel	Q43458
Dieldrin	BRL	µg/kg	14	4.5	5	8081A	08/02/09 1:07	jvogel	Q43458
Endosulfan I	BRL	µg/kg	14	4.2	5	8081A	08/02/09 1:07	jvogel	Q43458
Endosulfan II	BRL	µg/kg	14	3.1	5	8081A	08/02/09 1:07	jvogel	Q43458
Endosulfan Sulfate	BRL	µg/kg	14	4.6	5	8081A	08/02/09 1:07	jvogel	Q43458
Endrin	BRL	µg/kg	14	4.4	5	8081A	08/02/09 1:07	jvogel	Q43458
Endrin Aldehyde	BRL	µg/kg	14	4.4	5	8081A	08/02/09 1:07	jvogel	Q43458
Endrin Ketone	BRL	µg/kg	14	4.0	5	8081A	08/02/09 1:07	jvogel	Q43458
g-BHC	BRL	µg/kg	14	2.9	5	8081A	08/02/09 1:07	jvogel	Q43458
g-Chlordane	BRL	µg/kg	14	3.6	5	8081A	08/02/09 1:07	jvogel	Q43458
Heptachlor	BRL	µg/kg	14	2.9	5	8081A	08/02/09 1:07	jvogel	Q43458
Heptachlor Epoxide	BRL	µg/kg	14	3.3	5	8081A	08/02/09 1:07	jvogel	Q43458
Toxaphene	BRL	µg/kg	360	36	5	8081A	08/02/09 1:07	jvogel	Q43458

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Soil

Client Sample ID: PCS-2S
Prism Sample ID: 253112
COC Group: G0709702
Time Collected: 07/23/09 14:45
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample was diluted 5x due to the matrix.

Sample Preparation:	30.34 g	/	10 mL	3550B	07/28/09 10:00	cdaly	P25170
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Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	84	40 - 162
Decachlorobiphenyl (DCB)	105	26 - 204

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: PCS-1W
Prism Sample ID: 253113
COC Group: G0709702
Time Collected: 07/23/09 15:00
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Organochlorine Pesticides by GC/ECD									
4,4'-DDD	BRL	µg/L	0.050	0.0057	1	8081A	08/01/09 21:39 jvogel		Q43464
4,4'-DDE	BRL	µg/L	0.050	0.0098	1	8081A	08/01/09 21:39 jvogel		Q43464
4,4'-DDT	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 21:39 jvogel		Q43464
4,4'-Methoxychlor	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 21:39 jvogel		Q43464
a-BHC	BRL	µg/L	0.050	0.0028	1	8081A	08/01/09 21:39 jvogel		Q43464
a-Chlordane	BRL	µg/L	0.050	0.0039	1	8081A	08/01/09 21:39 jvogel		Q43464
Aldrin	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 21:39 jvogel		Q43464
b-BHC	BRL	µg/L	0.050	0.0048	1	8081A	08/01/09 21:39 jvogel		Q43464
Chlordane	BRL	µg/L	0.50	0.16	1	8081A	08/01/09 21:39 jvogel		Q43464
d-BHC	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 21:39 jvogel		Q43464
Dieldrin	BRL	µg/L	0.050	0.0043	1	8081A	08/01/09 21:39 jvogel		Q43464
Endosulfan I	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 21:39 jvogel		Q43464
Endosulfan II	BRL	µg/L	0.050	0.0062	1	8081A	08/01/09 21:39 jvogel		Q43464
Endosulfan Sulfate	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 21:39 jvogel		Q43464
Endrin	BRL	µg/L	0.050	0.022	1	8081A	08/01/09 21:39 jvogel		Q43464
Endrin Aldehyde	BRL	µg/L	0.050	0.0047	1	8081A	08/01/09 21:39 jvogel		Q43464
Endrin Ketone	BRL	µg/L	0.050	0.013	1	8081A	08/01/09 21:39 jvogel		Q43464
g-BHC	BRL	µg/L	0.050	0.0036	1	8081A	08/01/09 21:39 jvogel		Q43464
g-Chlordane	BRL	µg/L	0.050	0.0050	1	8081A	08/01/09 21:39 jvogel		Q43464
Heptachlor	BRL	µg/L	0.050	0.0056	1	8081A	08/01/09 21:39 jvogel		Q43464
Heptachlor Epoxide	BRL	µg/L	0.050	0.0044	1	8081A	08/01/09 21:39 jvogel		Q43464
Toxaphene	BRL	µg/L	0.50	0.14	1	8081A	08/01/09 21:39 jvogel		Q43464

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Water

Client Sample ID: PCS-1W
Prism Sample ID: 253113
COC Group: G0709702
Time Collected: 07/23/09 15:00
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				1000 mL /	10 mL	3510C	07/30/09 7:00	smanivanh	P25200

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	91	40 - 134
Decachlorobiphenyl (DCB)	99	13 - 186

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

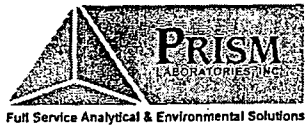
All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
 Attn: Matt Bramblett
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
 Defense
 Sample Matrix: Soil

Client Sample ID: PCS-1S
 Prism Sample ID: 253114
 COC Group: G0709702
 Time Collected: 07/23/09 15:05
 Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	73.8	%			1	SM2540 G	07/29/09 16:00	mbarber	
Organochlorine Pesticides by Gas Chromatography									
4,4'-DDD	BRL	µg/kg	14	3.8	5	8081A	08/02/09 1:48	jvogel	Q43458
4,4'-DDE	BRL	µg/kg	14	4.6	5	8081A	08/02/09 1:48	jvogel	Q43458
4,4'-DDT	BRL	µg/kg	20	3.3	5	8081A	08/02/09 1:48	jvogel	Q43458
4,4'-Methoxychlor	BRL	µg/kg	14	4.0	5	8081A	08/02/09 1:48	jvogel	Q43458
a-BHC	BRL	µg/kg	14	3.0	5	8081A	08/02/09 1:48	jvogel	Q43458
a-Chlordane	BRL	µg/kg	14	4.1	5	8081A	08/02/09 1:48	jvogel	Q43458
Aldrin	BRL	µg/kg	14	3.0	5	8081A	08/02/09 1:48	jvogel	Q43458
b-BHC	BRL	µg/kg	14	3.8	5	8081A	08/02/09 1:48	jvogel	Q43458
Chlordane	BRL	µg/kg	340	32	5	8081A	08/02/09 1:48	jvogel	Q43458
d-BHC	BRL	µg/kg	14	3.0	5	8081A	08/02/09 1:48	jvogel	Q43458
Dieldrin	BRL	µg/kg	14	4.3	5	8081A	08/02/09 1:48	jvogel	Q43458
Endosulfan I	BRL	µg/kg	14	4.0	5	8081A	08/02/09 1:48	jvogel	Q43458
Endosulfan II	BRL	µg/kg	14	3.0	5	8081A	08/02/09 1:48	jvogel	Q43458
Endosulfan Sulfate	BRL	µg/kg	14	4.4	5	8081A	08/02/09 1:48	jvogel	Q43458
Endrin	BRL	µg/kg	14	4.2	5	8081A	08/02/09 1:48	jvogel	Q43458
Endrin Aldehyde	BRL	µg/kg	14	4.2	5	8081A	08/02/09 1:48	jvogel	Q43458
Endrin Ketone	BRL	µg/kg	14	3.8	5	8081A	08/02/09 1:48	jvogel	Q43458
g-BHC	BRL	µg/kg	14	2.7	5	8081A	08/02/09 1:48	jvogel	Q43458
g-Chlordane	BRL	µg/kg	14	3.4	5	8081A	08/02/09 1:48	jvogel	Q43458
Heptachlor	BRL	µg/kg	14	2.7	5	8081A	08/02/09 1:48	jvogel	Q43458
Heptachlor Epoxide	BRL	µg/kg	14	3.1	5	8081A	08/02/09 1:48	jvogel	Q43458
Toxaphene	BRL	µg/kg	340	35	5	8081A	08/02/09 1:48	jvogel	Q43458

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Page 27 of 28



NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Laboratory Report

08/05/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense
Sample Matrix: Soil

Client Sample ID: PCS-1S
Prism Sample ID: 253114
COC Group: G0709702
Time Collected: 07/23/09 15:05
Time Submitted: 07/24/09 9:55

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample was diluted 5x due to the matrix.

Sample Preparation:	30.28 g	/	10 mL	3550B	07/28/09 10:00	cdaly	P25170
---------------------	---------	---	-------	-------	----------------	-------	--------

Surrogate	% Recovery	Control Limits
Tetrachloro-m-xylene (TCMX)	76	40 - 162
Decachlorobiphenyl (DCB)	96	26 - 204

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Level II QC Report

8/5/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense

COC Group Number: G0709702
Date/Time Submitted: 7/24/09 9:55

Organochlorine Pesticides by Gas Chromatography, method 8081A

Method Blank						QC Batch ID
	Result	RL	Control Limit	Units		
4,4'-DDD	ND	2	<1	µg/kg		Q43458
4,4'-DDE	ND	2	<1	µg/kg		Q43458
4,4'-DDT	ND	3	<1.5	µg/kg		Q43458
4,4'-Methoxychlor	ND	2	<1	µg/kg		Q43458
a-BHC	ND	2	<1	µg/kg		Q43458
a-Chlordane	ND	2	<1	µg/kg		Q43458
Aldrin	ND	2	<1	µg/kg		Q43458
b-BHC	ND	2	<1	µg/kg		Q43458
Chlordane	ND	50	<25	µg/kg		Q43458
d-BHC	ND	2	<1	µg/kg		Q43458
Dieldrin	ND	2	<1	µg/kg		Q43458
Endosulfan I	ND	2	<1	µg/kg		Q43458
Endosulfan II	ND	2	<1	µg/kg		Q43458
Endosulfan Sulfate	ND	2	<1	µg/kg		Q43458
Endrin	ND	2	<1	µg/kg		Q43458
Endrin Aldehyde	ND	2	<1	µg/kg		Q43458
Endrin Ketone	ND	2	<1	µg/kg		Q43458
g-BHC	ND	2	<1	µg/kg		Q43458
g-Chlordane	ND	2	<1	µg/kg		Q43458
Heptachlor	ND	2	<1	µg/kg		Q43458
Heptachlor Epoxide	ND	2	<1	µg/kg		Q43458
Toxaphene	ND	50	<25	µg/kg		Q43458

Laboratory Control Sample						
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
4,4'-DDT	31.5	33	µg/kg	95	75-141	Q43458
Aldrin	30.6	33	µg/kg	93	66-132	Q43458
Dieldrin	32.2	33	µg/kg	98	72-136	Q43458
Endrin	32.3	33	µg/kg	98	74-147	Q43458
Heptachlor	31.3	33	µg/kg	95	72-134	Q43458

Matrix Spike						
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
253108 4,4'-DDT	26.6	33	µg/kg	81	56-163	Q43458
Aldrin	30.7	33	µg/kg	93	57-137	Q43458
Dieldrin	31.9	33	µg/kg	97	60-141	Q43458

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Level II QC Report

8/5/09

Hart & Hickman
 Attn: Matt Bramblett
 2923 South Tryon St. Ste 100
 Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
 Defense

COC Group Number: G0709702
 Date/Time Submitted: 7/24/09 9:55

Matrix Spike							QC Batch ID
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		
253108 Endrin	35.2	33	µg/kg	107	65-164		Q43458
Heptachlor	29.0	33	µg/kg	88	63-142		Q43458

Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
253108 4,4'-DDT	27.1	33	µg/kg	82	56-163	2	0 - 38	Q43458
Aldrin	31.2	33	µg/kg	95	57-137	2	0 - 29	Q43458
Dieldrin	32.9	33	µg/kg	100	60-141	3	0 - 30	Q43458
Endrin	33.2	33	µg/kg	101	65-164	6	0 - 21	Q43458
Heptachlor	30.6	33	µg/kg	93	63-142	5	0 - 27	Q43458



NC Certification No. 402
SC Certification No. 99012
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Level II QC Report

8/5/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense

COC Group Number: G0709702
Date/Time Submitted: 7/24/09 9:55

Organochlorine Pesticides by GC/ECD, method 8081A

Method Blank	Result	RL	Control Limit	Units	QC Batch ID
4,4'-DDD	ND	0.05	<0.025	µg/L	Q43464
4,4'-DDE	ND	0.05	<0.025	µg/L	Q43464
4,4'-DDT	ND	0.05	<0.025	µg/L	Q43464
4,4'-Methoxychlor	ND	0.05	<0.025	µg/L	Q43464
a-BHC	ND	0.05	<0.025	µg/L	Q43464
a-Chlordane	ND	0.05	<0.025	µg/L	Q43464
Aldrin	ND	0.05	<0.025	µg/L	Q43464
b-BHC	ND	0.05	<0.025	µg/L	Q43464
Chlordane	ND	0.5	<0.25	µg/L	Q43464
d-BHC	ND	0.05	<0.025	µg/L	Q43464
Dieldrin	ND	0.05	<0.025	µg/L	Q43464
Endosulfan I	ND	0.05	<0.025	µg/L	Q43464
Endosulfan II	ND	0.05	<0.025	µg/L	Q43464
Endosulfan Sulfate	ND	0.05	<0.025	µg/L	Q43464
Endrin	ND	0.05	<0.025	µg/L	Q43464
Endrin Aldehyde	ND	0.05	<0.025	µg/L	Q43464
Endrin Ketone	ND	0.05	<0.025	µg/L	Q43464
g-BHC	ND	0.05	<0.025	µg/L	Q43464
g-Chlordane	ND	0.05	<0.025	µg/L	Q43464
Heptachlor	ND	0.05	<0.025	µg/L	Q43464
Heptachlor Epoxide	ND	0.05	<0.025	µg/L	Q43464
Toxaphene	ND	0.5	<0.25	µg/L	Q43464

Laboratory Control Sample	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
4,4'-DDT	0.918	1	µg/L	92	66-142	Q43464
Aldrin	0.873	1	µg/L	87	62-124	Q43464
Dieldrin	0.935	1	µg/L	94	69-130	Q43464
Endrin	0.938	1	µg/L	94	69-144	Q43464
Heptachlor	0.891	1	µg/L	89	61-136	Q43464

Matrix Spike	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
Sample ID:						
253109 4,4'-DDT	0.973	1	µg/L	97	15-171	Q43464
Aldrin	0.947	1	µg/L	95	24-142	Q43464
Dieldrin	0.991	1	µg/L	99	27-148	Q43464

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NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Level II QC Report

8/5/09

Hart & Hickman
Attn: Matt Bramblett
2923 South Tryon St. Ste 100
Charlotte, NC 28203

Project ID: BDP-003 Wilson Pest
Defense

COC Group Number: G0709702
Date/Time Submitted: 7/24/09 9:55

Matrix Spike					Recovery	Recovery			
Sample ID:	Result	Spike Amount	Units	%	Ranges			QC Batch	
					%			ID	
253109 Endrin	1.01	1	µg/L	101	35-165			Q43464	
Heptachlor	0.971	1	µg/L	97	38-150			Q43464	
Matrix Spike Duplicate									
Sample ID:	Result	Spike Amount	Units	Recovery	Recovery	RPD	RPD	QC Batch	
				%	Ranges	%	Range	ID	
					%		%		
253109 4,4'-DDT	0.955	1	µg/L	96	15-171	2	0 - 30	Q43464	
Aldrin	0.938	1	µg/L	94	24-142	1	0 - 35	Q43464	
Dieldrin	0.969	1	µg/L	97	27-148	2	0 - 28	Q43464	
Endrin	0.987	1	µg/L	99	35-165	2	0 - 27	Q43464	
Heptachlor	0.970	1	µg/L	97	38-150	0	0 - 36	Q43464	

#-See Case Narrative



Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: Hart & Hickman
Report To/Contact Name: Scott Bramblett
Reporting Address: 2223 S Taven St. Suite 100
Charlotte, NC 28203

Phone: 704-526-0007 Fax (Yes) (No):

Email (Yes) (No) Email Address: msbramblett@hart&hickman.com

EDD Type: PDF ☒ Excel ☐ Other ☐

Site Location Name: Wilson Test Defense

Site Location Physical Address: Winston Salem, NC

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2 QUOTE # TO ENSURE PROPER BILLING: _____

Project Name: BDP-003

Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)

*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements

Invoice To: Hart & Hickman

Address: Charlotte, NC

Purchase Order No./Billing Reference _____

Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days

"Working Days" ☐ 6-9 Days ☒ Standard 10 days ☐ Rush Work Must Be Pre-Approved

Samples received after 15:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received ON WET ICE? Temp: <u>02</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROPER PRESERVATIVES indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received WITHIN HOLDING TIMES?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CUSTODY SEALS INTACT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VOLATILES rec'd W/OUT HEADSPACE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROPER CONTAINERS used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC ☐ USACE ☐ FL ☐ NC ☒

SC ☐ OTHER ☐ N/A ☐

Water Chlorinated: YES ☐ NO ☒

Sample Iced Upon Collection: YES ☒ NO ☐

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	ANALYSES REQUESTED										REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO.	SIZE													
MW-1	7/23/09	1030	W	A	1		NAL	X											253101
MW-2	7/23/09	1100	W	A	1			X											253102
MW-3	7/23/09	1130	W	A	1			X											253103
MW-4	7/23/09	1230	W	A	1			X											253104
MW-5	7/23/09	1330	W	A	1			X											253105
MW-6	7/23/09	1200	W	A	1			X											253106
MW-7	7/23/09	1300	W	A	1			X											253107
PCS-45	7/23/09	1535	S	A	2			X											253108
PCS-3W	7/23/09	1415	W	A	2			X											253109
PCS-3S	7/23/09	1420	S	A	2			X											253110

Sampler's Signature: [Signature]

Sampled By (Print Name): Grant Garner

Affiliation: HTH

PRESS DOWN FIRMLY - 3 COPIES

Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) [Signature]

Received By: (Signature) [Signature]

Date

7/24/09

Military/Hours

955

Additional Comments:

Relinquished By: (Signature)

Received By: (Signature)

Date

7/24/09

Military/Hours

955

Relinquished By: (Signature)

Received For Prism Laboratories By: [Signature]

Date

7/24/09

Military/Hours

955

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

COC Group No.

G0709702

☐ Fed Ex ☐ UPS ☒ Hand-delivered ☐ Prism Field Service ☐ Other

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	CERCLA:	LANDFILL:	OTHER:
<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC	<input type="checkbox"/> NC <input type="checkbox"/> SC

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

PRISM USE ONLY

Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL



449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
Phone: 704/529-6364 • Fax: 704/525-0409

Site Location Physical Address: Winston Salem, NC

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING:

Purchase Order No./Billing Reference _____

Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days

"Working Days" ☐ 6-9 Days ☐ Standard 10 days ☐ Rush Work Must Be Pre-Approved

Samples received after 15:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

**(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES
RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)**

	YES	NO	N/A
Samples INTACT upon arrival?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received ON WET ICE? Temp. <u>0-2</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROPER PRESERVATIVES indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Received WITHIN HOLDING TIMES?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CUSTODY SEALS INTACT?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VOLATILES rec'd W/OUT HEADSPACE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PROPER CONTAINERS used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sample Iced Upon Collection: YES ☒ NO ☐

PCS-2W	7/23/07	1440	W	A	2		None	X								253111
PCS-2S	7/23/07	1445	S	A	2		↓	X								253112
PCS-1W	7/23/07	1500	W	A	2			X								253113
PCS-1S	7/23/07	1505	S	A	2			X								253114

Affiliation HAH

100	100
-----	-----

[illegible]

Mileage

**SEE REVERSE FOR
TERMS & CONDITIONS**

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)